Remarks

Claims 1-20 are pending in this application. Claims 7 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claim 18 is rejected to because of informalities. Claims 1, 3-10 and 12-20 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,684,959 to Bhat et al. (hereinafter "Bhat"). Claims 2 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhat as applied to claims 1 and 10, and further in view of U.S. Patent No. 5,850,397 to Raab et al. (hereinafter "Raab").

A. Indefiniteness Rejection of Claims 7 and 8

Claims 7 and 8 are rejected by the Examiner under 35 U.S.C. 112, second paragraph, for failing to point out and distinctly claim the subject matter which applicant regards as the invention. As a result, claims 7 and 8 have been amended. Therefore, Applicant respectfully requests that the rejection of claims 7 and 8 under 35 U.S.C. 112, second paragraph, be withdrawn.

B. Anticipation Rejection of Claims 1, 3-10 and 12-20 Over Bhat.

1. Claim 1

Independent claim 1 is rejected by the Examiner under 35 U.S.C. § 102(b) as being anticipated by Bhat. In order to anticipate a claim under 35 U.S.C. § 102, a single prior art reference must teach every element of the claim. M.P.E.P. § 2131. Therefore, each element of independent claim 1 must be disclosed in Bhat for a proper rejection to be made under 35 U.S.C. § 102(b). However, Bhat does not disclose each element of claim 1.

The Examiner states that Bhat teaches "the first node transmits a first identification message from the first port, the identification message addressed to an address."

(Office Action, page 3). The Examiner points to the passage in Bhat at column 2, lines 10 through 11 as disclosing this element.

The cited passage does not teach that the first node transmits a first identification message addressed to an address. Rather, the passage teaches only that the system sends a request to all stations on the network for station management information. The cited text does not indicate that the first identification message is addressed to an address. In contrast, Figure 11 of the Bhat patent further discusses the process by which the physical information is collected, and specifically states that the mapping only occurs in response to a request for information going to all stations on a network. Col. 8, ll. 19-24. Bhat merely explains that a MAC structure is created for a station. The "upstream neighbor address" is only stored in the MAC structure-- it says little to anything about identification messages sent between different ports of different nodes.

In contrast to Bhat, independent claim 1 of the present application teaches "the first node transmits a first identification message from the first port, the identification message addressed to an address." This type of message transmission is found nowhere in Bhatt, but is distinctly claimed in the present invention.

The Examiner also claims column 4, lines 52 through 58 of Bhat teaches "the second node receives the identification message on the second port." Bhatt does not teach, however, the claim elements against which the Examiner cites it.

The Bhatt passage discusses only the collection of information to build the logical map of the network. In this passage, Bhat discusses that when the user wants to see a logical map, they press a start button on the "network advisor" to begin to receive "neighbor information frames from all of the stations on the network." Col. 4, ll. 49-58. The Examiner claims that this sufficiently implies that the second node received the id message. (Office Action, page 4). However, as indicated by column 4, lines 9 through 12, only the "Upstream Neighbor Address (UNA)" is received by a MAC in the Neighbor Information Frame. As is the case with token ring networks, the only requirement for the frames was to provide the upstream neighbor address. For that, it was adequate for a network advisor to receive neighbor information frames from all of the stations on the network. Col. 4, ll. 54-58. This is in contrast to the claims which require that the "second node receives the identification message on the second port." Further, the cited portion in Bhat is in reference to building a logical map of the network, not a physical mapping.

Finally, Bhat offers no disclosure regarding the second node logging the identification information whatsoever. Not only does Bhat fail to teach the logging of the identification information, but it suggests an entirely different approach to storing neighbor information frames. According to Bhat, a block determines whether a "MAC structure" exists for the station that generated the "neighbor information frame." Col. 5, ll. 3-27. The MAC structure is then appended to the active MAC list, and then the block stores the UNA from the neighbor information frame into the MAC structure. Col. 5, ll. 3-27. This suggests that even if the second node received identification information, it does not perform any logging function. Thus, the cited portion of Bhat does not disclose "the second node logs the identification information."

Because Bhat does not teach "the first node transmits a first identification message from the first port, the identification message addressed to an address," "the second node receives the identification message on the second port[,]" or "the second node logs the identification information," claim 1 is not anticipated by Bhatt. Therefore, Applicant respectfully requests that the rejection of independent claim 1 under 35 U.S.C. 102(b) as being anticipated by Bhatt be withdrawn, and that this claim be passed to issuance.

2. Claim 10

Independent claim 10 is rejected by the Examiner under 35 U.S.C. 102(b) as being anticipated by Bhat. As noted above, because anticipation requires that a single prior art reference teach every element of a claim, each element of claim 10 must be disclosed in Bhat for a proper rejection to be made under 35 U.S.C. § 102(b). However, Bhat does not disclose each element of claim 10.

The Examiner states that Bhat teaches "determining a nearest neighbor for the first node, where the nearest neighbor has received an identification message from the first node." (Office Action, page 7). To show anticipation of this element of claim 10, the Examiner points to the passages in Bhat at column 4, lines 59 through 61 and column 5, lines 3 through 26. These passages in Bhat, however, do not teach the elements claimed in the present invention.

Bhat does not disclose determining a nearest neighbor where that nearest neighbor has received an identification message from the first node. The cited passage of Bhat does not refer to a nearest neighbor receiving a message. The cited passage discusses a "MAC structure" which is developed and appended to the "active MAC list" for MACs that have sent NIFs for the time period. Col. 5, ll. 3-27. This all occurs during the processing of neighbor information frames. Col. 2, ll. 31-32. It is during this process that the block stores only the upstream neighbor address into the MAC structure. Thus while Bhatt may discuss storing an upstream neighbor address in a MAC structure, it does not teach determining a nearest neighbor for the first node that has received an identification message from the first node as described in claim 10.

Bhat also fails to teach "transmitting from a first port on a first node, an identification message," "receiving on a second port of a second node, the identification message," and "logging the identification information" as required by independent claim 10. (Office Action, pages 6-7).

As noted above, Bhat stores messages in a MAC structure. This structure is filled during the processing of the neighbor information frames. Col. 2, ll. 31-32. Further, this structure only stores the upstream neighbor address in the token ring network, as opposed to the functionality of the present invention. Because Bhat does not disclose any teachings on the above discussed elements, Bhat does not include each element of the claimed invention and cannot be found to anticipate claim 10.

3. Claim 18

Independent claim 18 is rejected by the Examiner under 35 U.S.C. 102(b) as being anticipated by Bhatt. As noted above, because anticipation requires that a single prior art reference teach every element of a claim, each element of claim 18 must be disclosed in Bhatt for a proper rejection to be made under 35 U.S.C. § 102(b). However, Bhatt does not disclose each element of claim 18.

The Examiner states that Bhat teaches a "first node is operable to[ ] transmit a first identification message, the first identification message addressed to an address" and "receive a second message on the first port, the second message addressed to the address, the second message comprising identification information about a second node in the communication network." (Office Action, page 9). As with the previous claims, because the messages regarding the neighbor information frames are sent to a MAC structure, Bhat does not disclose the required elements of the claims. Because Bhat discusses upstream neighbor addresses in MAC structures that are appended in a MAC list, Bhat cannot anticipate claim 18. Claim 18 should be allowed for at least this reason.

4. Dependent Claims 3-9, 12-17, and 19-20

Claims 3-9, 12-17, and 19-20 depend from claims 1, 10 and 18. Because Bhatt fails to teach every element of independent claims 1, 10 and 18, the reference also fails to teach every element of claims depending from them. In addition, Bhatt fails to teach "wherein the identification information comprises an IP address," as required by claims 5, 14 and 19, and fails to teach identification messages that further comprise statistical information, as required by claims 7 and 16. Therefore, Applicant respectfully submits that the rejection should be withdrawn and claims 3-9, 12-17, and 19-20 should be passed to issuance.

C. Obviousness Rejection of Claims

The examiner has rejected Claims 2 and 11 under 35 U.S.C. § 103(a) as being obvious over Bhat in view of Raab. Applicant submits that the combination of Bhat and Raab does not render these claims obvious. In order to establish a *prima facie* case of obviousness, the references cited by the Examiner must disclose all claimed limitations. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). Claim 2 depends on independent Claim 1 and Claim 11 depends on independent claim 10 and thus those claims incorporate all of the limitations of the independent claims. Specifically, Bhat, in view of Raab, fails to teach or suggest all the limitations of Claims 2 and 11. The Examiner admits that Bhat does not teach that "the address is a multicast address" or that "the identification message is addressed to a multicast address." The Examiner cites Raab as meeting this deficiency.

However, there is no motivation to combine Bhat with Raab as Bhat is directed to a "a system that monitors neighbor information frames (NIFs) . . . to determine the logical map of the network" as well as the "physical connections between each of the stations within the network." Bhat, Abstract. Raab, though, is geared toward identifying mixed-media network topology and specifically states that the "hello" messages flowing through the network will dramatically increase global network traffic and render the determination unfeasible. Raab, Abstract and col. 1, l. 64 through col. 2, l. 6. Thus, the Raab reference expressly discounts and warns against using Hello messages as multicast in traditional detection methods such as those disclosed in Bhat. Therefore, there is no motivation to combine the feature of Hello multicast address messages in Raab with the topology determination in Bhat.

Further, not only is there no motivation to combine Bhat and Raab, Raab does not disclose the missing elements of claim 1 as discussed above with Bhat. As with the previous discussion, because the messages regarding the neighbor information frames are sent to a MAC structure, Bhat does not disclose the required elements of the independent claims. The Examiner does not assert that Raab teaches the missing elements. Therefore, the combination of Bhat and Raab still fails to disclose the limitations of claims 2 and 11 because Raab does not cure the deficiencies of the independent claims. Applicant respectfully requests withdrawal of rejections to Claims 2 and 11 and that these claims be passed to issuance.

D. Objections to Claim 18

Claim 18 was objected to because of informalities. Applicant has amended claim 18 to cure such informalities and therefore Applicant respectfully requests that the rejection of claim 18 be withdrawn.

E. No Waiver

All of Applicant's arguments are without prejudice or disclaimer. Additionally, Applicant has merely discussed example distinctions from the cited references. Other distinctions may exist, and Applicant reserves the right to discuss these additional distinctions in a later Response or on Appeal, if appropriate. By not responding to additional statements made by the Examiner, Applicant does not acquiesce to the Examiner's additional statements, such as, for example, any statements relating to what would be obvious to a person of ordinary skill in the art. The example distinctions discussed by Applicant are sufficient to overcome the obviousness rejections.

Conclusion

Applicant believes that pending claims 1-20 are in condition for allowance, and requests the same.

Respectfully submitted,

__/Bradley Bowling/__________________
Bradley Bowling
Registration No. 52,641

Baker Botts L.L.P.
910 Louisiana
One Shell Plaza
Houston, Texas 77002-4995
Tel: (713) 229-1802

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